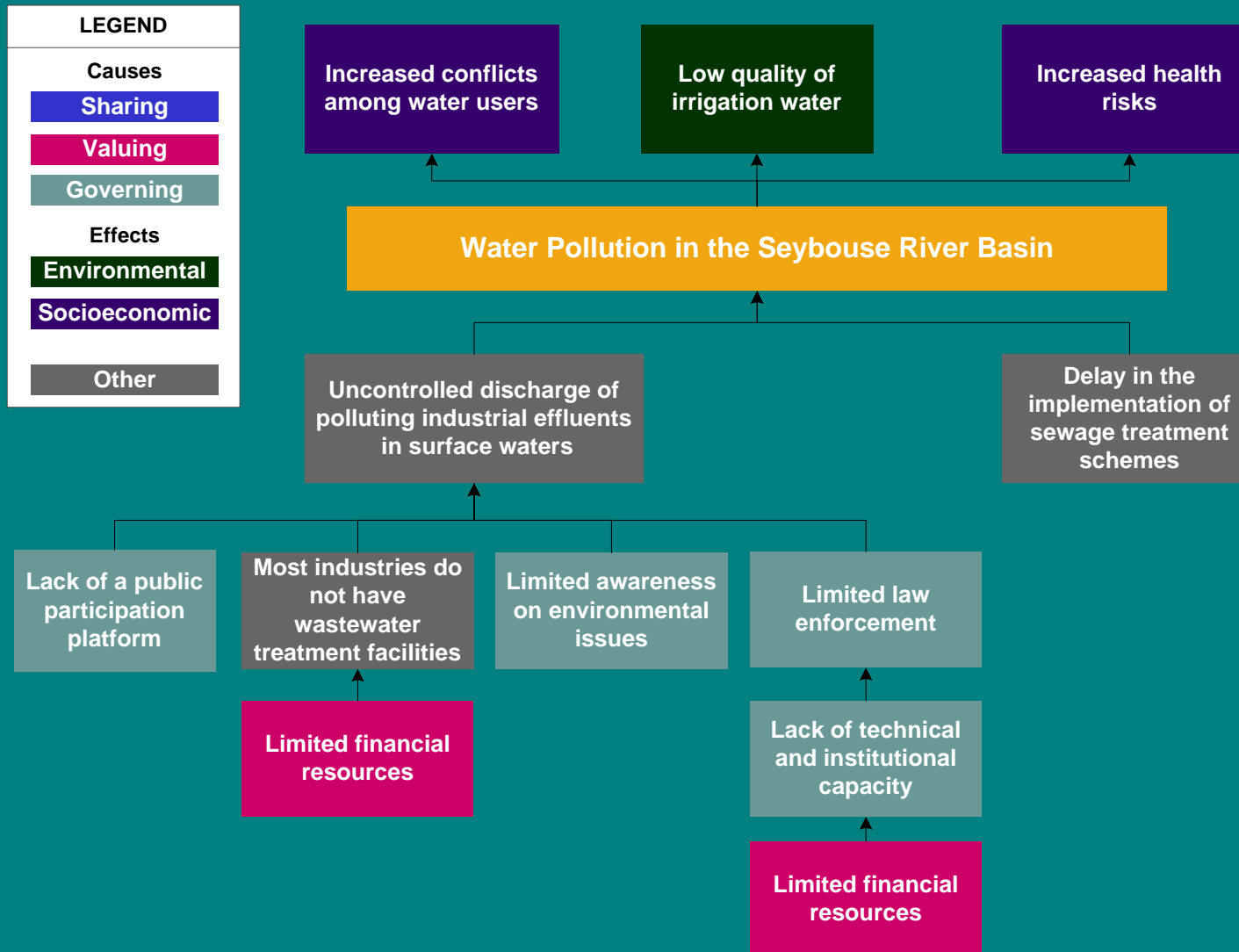
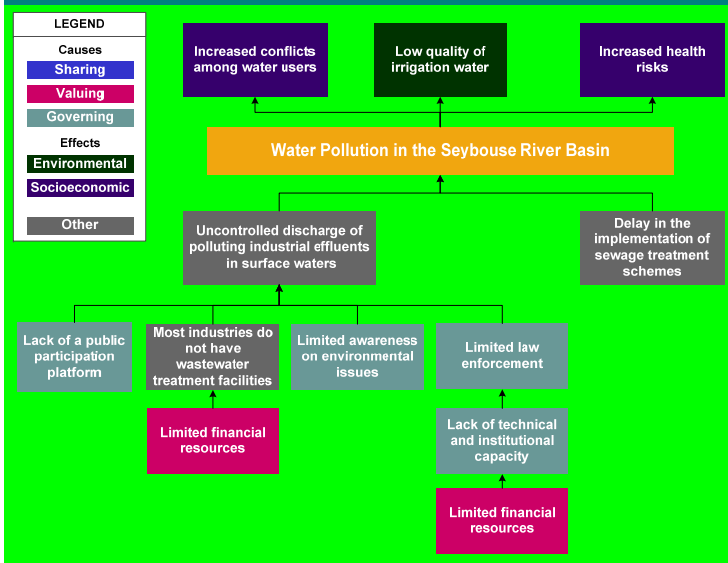


Causes and effects of pollution – The problem tree



Objectives for addressing water pollution



O1. Mitigation of industrial pollution in the Seybouse River Basin

O2. Control over the discharge of polluting industrial effluents

O3. Implementation of public participation processes

O4. Development of wastewater treatment facilities for industries

O6. Increased awareness on environmental issues

O7. Full law enforcement

O5. Enhancement of financial resources

O8. Development of technical and institutional capacity

O9. Enhancement of financial resources

Alternative Economic & Institutional Instruments for an Integrated strategy

- Category A: Options to minimize pollution from industrial effluents
- Category B: Options to increase the regulatory capacity of governmental authorities
- Category C: Options to strengthen public participation processes in the River Basin

Options	Function			Targeted objectives	Prerequisites
	Overall (national) water policy and law	Water management at the River Basin or Aquifer scale	Provision of Water Services		
Category A: Options to minimize pollution from industrial effluents					
A1. Establishment of (stricter) effluent (emission) standards and delineation of vulnerable/protected areas	X			O1	
A2. Establishment of technology standards for specific industrial processes		X		O1	
A3. Establishment of discharge permits				O1	A1, A2
A4. Surveillance, monitoring and enforcement of legislation on wastewater discharge: <ul style="list-style-type: none"> • Penalties for non compliance with emission standards • Reduction of potential government subsidies in case of non-compliance 		X		O2	

Options	Function			Targeted objectives	Prerequisites
	Overall (national) water policy and law	Water management at the River Basin or Aquifer scale	Provision of Water Services		
Category A: Options to minimize pollution from industrial effluents					
A5. Implementation of effluent charge systems (e.g. pollution tax, pollution charge)	X (legislation)	X (implementation)		O2	
A6. Voluntary agreements with industries to reduce wastewater production and discharge of polluting effluents	X (legislation)	X (implementation)		O4, O5	
A7. Environmental performance bonds for industries	X (legislation)	X (implementation)		O4, O5	
A8. Seminars and training on wastewater treatment and water recycling in the industrial sector		X	X	O3, O4, O5	
A9. Revolving funds for financing collective effluent treatment schemes	X			O5	
A10. Grants, tax incentives for relocation	X			O4, O5	
A11. Tradable emission permits	X (legislation)	X (implementation)		O2, O5	

Options	Function			Targeted objectives	Prerequisites
	Overall (national) water policy and law	Water management at the River Basin or Aquifer scale	Provision of Water Services		
Category B: Options to increase the regulatory capacity of governmental authorities					
B1. Improvement of technical capacity of management bodies and water utilities: <ul style="list-style-type: none"> • Training of personnel • Soft/ tax free loans for buying equipment • Financing research for the development of computer based tools (e.g. GIS databases) 	X	X	X	O8	-
B2. Capacity building for the application of enforcement mechanisms: <ul style="list-style-type: none"> • Training • Introduction of information technologies • Process control 	X	X	X	O8	-

Options	Function			Targeted objectives	Prerequisites
	Overall (national) water policy and law	Water management at the River Basin or Aquifer scale	Provision of Water Services		
Category C: Options to enhance public participation & involvement					
C1. Information sharing and public access to information	X (legislation)	X (implementation)	X (implementation)	O3	-
C2. Citizens' jury and panels to support detailed and critical consideration of key issues and may identify areas of agreement or disagreement	X (legislation)	X (implementation)		O3	
C3. Information campaigns targeting the general public (water conservation, waste management, environmental protection)		X	X	O3	-